A LIST OF THE BATRACHIANS AT PRESENT KNOWN TO INHABIT SIAM.

By Malcolm A. Smith, M.R.C.S., L.R.C.P., F.Z.S.

Our knowledge of the Batrachian fauna of Siam has increased so much since Flower's article upon the subject in 1899, that no apology is needed in publishing this list. A total new of 52 species against his original 20, will show how much has been accomplished in the last few years. Much, however, still remains to be done.

Of the frogs of the genus Rana, 21 species are recorded here, but many others are known from the neighbouring countries and will no doubt be found to inhabit Siam. The curious burrowing frogs, Callula, Glyphoglossus and Calluella, and the genus Microhyla are well represented, and the list of those given must be fairly complete. Of Rhacophorus, Ixalus and Megalophrys, principally hill dwellers, practically nothing is yet known, and many species should be discovered in the North and along the Western boundary.

In general bionomics much also remains to be accomplished, and in connection with this subject, I should like to draw the attention of members of our Society to the extremely interesting work which can be done in studying the larval forms of these creatures.

From Bangkok itself, Flower recorded 12 species, and I have only been able to add one more, namely, Oxyglossus laevis martensi. Curiously enough it is one of the commonest frogs and abounds throughout the city. Rana esculenta I have not included in the 12, and doubt if it occurs in Siam at all. In spite of the wide range of this frog across Europe and Asia, it has been found nowhere else so far south, and it is more likely that the specimens said to have come from Bangkok have been wrongly labelled and were obtained in China.

Five more species may ultimately be found to occur in Bangkok, as I have introduced them myself in the past few years. They are

¹ P.Z.S., 1899, p 885. Notes on a Second Collection of Batrachians made in the Malay Peninsula and Siam, with a List of the Species Recorded from those Countries. By Stanley S. Flower, F.Z.S.,

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Rana nigrovittata, Rana lateralis, Glyphoglossus mollossus, Calluella guttulata and Bufo parvus. The firt named I heard quite recently during a storm of rain, but of the others I have had no knowledge since their introduction, and they may have died.

As will be seen from the brief remarks attached to each species, very few of those recorded are actually rare in the country. The majority are common, if not everywhere, at least in certain localities; and provided one knows how and where to look for them, there is usually no difficulty in obtaining specimens. Frogs and toads are chiefly nocturnal in their habits, and many have remarkable powers of concealing themselves by day. The burrowing frogs, and the representatives of the genus Megalophrys, are noteworthy in this respect, and in many localities I have only discovered their presence by their tadpoles.

In conclusion I should like to thank the following lady and gentlemen for their kind and valuable assistance in collecting specimens for me, and without whose help so complete a list could not have been produced:—

H. R. H. Prince Abhakara of Chumporn, Mrs. D. J. Collins, Messrs. C. J. Aagaard, P. A. R. Barron, G. F. W. Elwes, K. G. Gairdner, E. J. Godfrey, C. L. Groundwater, E. G. Herbert, A. J. Irwin, P. R. Kemp, A. L. Queripel, G. E. Webb, C. M. Weston, W. J. F. Williamson and H. C. St. J. Yates.

The geographical divisions referred to are the same as those used in my last list. (antea p. 49).

RANIDÆ.

1. OXYGLOSSUS LIMA (Gravenh.).
Common and widely distributed. Found in Bangkok.

2. OXYGLOSSUS LAEVIS MARTENSI (Peters). Common and widely distributed. Found in Bangkok.

3. ELACHYGLOSSA GYLDENSTOLPEI Andersson.
Recently described from Northern Siam (Zool. Results Swedish
Exp., Band 55, No. 4, p. 15, 1916.)

4. RANA KUHLI Dum. & Bib.

Peninsular, Western and Northern Siam. Common on many of the hills above 300 metres.

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5. RANA DORIAE Bouleng.

Peninsular, Western and South-eastern Siam.

6. RANA PILEATA Bouleng.

Hills of South-eastern and Northern Siam. This new frog was described in the last number of this Journal.

7. RANA LIMBORGI W. Sclater.

Peninsular and Northern Siam.

8. RANA MACRODON Dum. & Bib.

Peninsular, South-western and Western Siam as far north as Lat 17°.

9. Rana Rugulosa Wiegm.²

Central and Northern Siam. Common all round Bangkok and the neighbouring country.

10. RANA CANCRIVORA Gravenh.3

Peninsular and Central Siam.

11. RANA LIMNOCHARIS Wiegm.

Common almost everywhere. Found in Bangkok.

12. RANA GLANDULOSA Bouleng.

Patani, Peninsular Siam.

13. RANA ESCULENTA Linn.

The British Museum has specimens of this frog said to have come from Bangkok.

14. RANA MACRODACTYLA (Günther).

Widely distributed and not uncommon. Found in Bangkok.

15. RANA LATERALIS Bouleng.

Central, South-eastern and Eastern Siam.

16. RANA ALTICOLA Bouleng.

Patiyu, Peninsular Siam.

17. RANA MORTENSENI Bouleng.

Koh Chang, S. E. Siam, and near Korat, E. Siam.

18. RANA NIGROVITTATA (Blyth).

^{2 &}amp; 3 Dr. Annandale's paper separating these two forms from the true R. tigrina of India, has not yet appeared, but preliminary mention of the confusion which has long existed with regard to these three species was made in the last number of this Journal, p. 91.

Widely distributed and not uncommon. Found chiefly on the hills.

19. RANA HUMERALIS Bouleng.

Nakon Sritamarat, Peninsular Siam.

20. RANA ERYTHRÆA (Schleg.).

Common and widely distributed, but not yet recorded from the North. Found in Bangkok.

21. RANA LABIALIS Bouleng.

Nakon Sritamarat, Peninsular Siam.

22. RANA SCUTIGERA Andersson.

Near Koh Lak, S. W. Siam (Zool. Results Swedish Exp. Siam, Band 55, No. 4, p. 15, 1916).

23. RANA LIVIDA (Blyth).

Doi Nga Chang, Northern Siam.

24. RANA LARUTENSIS Bouleng.

Raheng, Western Siam.

25. Rhacophorus leucomystax (Gravenh.)

Common almost everywhere. Found in Bangkok.

26. Rhacophorus nigropalmatus Bouleng.

Peninsular and Northern Siam. Rare.

27. IXALUS LARUTENSIS Bouleng.

Hills of Peninsular and Northern Siam. Common on Doi Nga Chang above 1000 Metres.

28. IXALUS ASPER Bouleng.

Hills of Western Siam. (Rept. and Batrach, Malay Pen., p. 256).

29. IXALUS HORRIDUS Bouleng.

Patani, Peninsular Siam.

ENGYSTOMATIDÆ.

30. CALOPHRYNUS PLEUROSTIGMA Tschudi.
Patiyu, Peninsular Siam; Krabin and Khao Sebab, South-eastern Siam.

31. MICROHYLA PULCHRA (Hallow).

Common and widely distributed.

32. MICROHYLA INORNATA Bouleng.

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Common and widely distributed. Found in Bangkok.

33. MICROHYLA ORNATA (Dum. & Bib.).

Common and widely distributed. Found in Bangkok.

34. MICROHYLA BUTLERI Bouleng.

Widely distributed, but not so common as the two preceding species.

35. MICROHYLA ACHATINA (Boie).

Common and widely distributed. Found in Bangkok.

36. MICROHYLA ANNECTENS Bouleng.

Patiyu, Peninsular Siam.

37. MICROHYLA BERDMOREI (Blyth).

Widely distributed. Common in certain localities.

38. CALLULA MEDIOLINEATA M. A. Smith.

Nong Pling, Central Siam; Ubon, Eastern Siam; Koh Lak, South-western Siam. Apparently much rarer than either of the next three species.

39. CALLULA PULCHRA Gray.

Common and widely distributed. Found in Bangkok.

40. Glyphoglossus Molossus Günth.

Widely distributed. Common is suitable localities. 4

DISCOPHIDÆ.

41. CALLUELLA GUTTULATA (Blyth). Widely distributed. Common in suitable localities.⁵

BUFONIDÆ.

42. Bufo asper Gravenh.

Hills of Peninsular and Western Siam.

43. Bufo macrotis Bouleng.

Krabin, Eastern Siam; Sai Yoke, Western Siam; Patani, Peninsular Siam.

44. Bufo Melanosticus Schneider.

Common almost everywhere. Found in Bangkok.

^{4 &}amp; 5 Records from S. W. Siam (Prachuap Kirikan) based on the tadpoles only.

45. Bufo parvus Bouleng.
Widely distributed. Not yet recorded from the North.

PELOBATIDÆ.

46. MEGALOPHRYS MONTANA Kuhl.

Found on most of the hill ranges throughout the country. 6

47. MEGALOPHRYS NASUTA (Schlegel).

Patani, Peninsular Siam.

48. MEGALOPHRYS PELODYTOIDES Bouleng.

Doi Nga Chang, N. Siam. Not uncommon above 1000 metres.

49. Megalophrys hasseltii Tschudi.

Hill country of Peninsular, Western and Northern Siam, but apparently not at high elevations.

SALAMANDRIDÆ.

- 50. Amblystoma persimile (Gray).

 Obtained by Mouhot, probably on the hills near Luang Prabang.

 CÆCILIIDÆ.
 - 51. ICTHYOPHIS GLUTINOSUS Linn.

Khao Pleung, Northern Siam; Klong Bang Lai, South-western Siam; Bangkok. Common in all three localities.

52. ICTHYOPHIS MONOCHROUS (Bleek.). Khao Pleung and Doi Nga Chang, N. Siam.

⁶ Records from Northern Siam (Doi Nga Chang), and Khao Sebab (S. E. Siam) based upon the tadpoles only.